



SERVICE LETTER

Portable Power

SL#: 352003-06-20
Date: 29/06/2020
Product: GEG GENERATOR
Subject: Coolant Requirements and Maintenance

ESTIMATED INSPECTION TIME: 15 MINUTES
*Approximate time only; actual time may vary.

MODEL	SERIAL NUMBER
G20 XW/XF	G20NCJ500001->
G24 XW/XF	G24NCJ600001->
G30 XW/XF	G30NCJ500001->
G36 XW/XF	G36NCJ600001->
G45 XW/XF	G45NCJ500001->
G48 XW/XF	G48NCJ600001->
G60 XW/XF	G60NCJ500001->
G71 XW/XF	G71NCJ600001->

WARNING

HOT PRESSURISED FLUID - Remove cap slowly to relieve **PRESSURE** from **HOT** radiator. Protect skin and eyes. **HOT** water or steam and chemical additives can cause serious personal injury.

HAZARDOUS SUBSTANCE PRECAUTION

CAUTION

Use extreme care to avoid contacting hot surfaces (engine exhaust manifold and piping).

Ensure that adequate ventilation of the cooling system and exhaust gases is maintained at all times.

The following substances are used in the manufacture of this machine and may be hazardous to health if used incorrectly.

Avoid ingestion, skin contact and breathing fumes for the following substances: Antifreeze, Engine Lubricating Oil, Preservative Grease, Rust Preventative, Diesel Fuel and Battery Electrolyte.

The following substances may be produced during the operation of this machine and may be hazardous to health:

- Avoid build-up of engine exhaust fumes in confined spaces.
- Avoid breathing exhaust fumes.
- Avoid breathing brake lining dust during maintenance.
- Always operate in a well ventilated area.

WARNINGS

Warnings call attention to instructions which must be followed precisely to avoid injury or death.

CAUTIONS

Cautions call attention to instructions which must be followed precisely to avoid damaging the product, process or its surroundings.

NOTES

Notes are used for supplementary information.

INTRODUCTION

It has come to the attention of DOOSAN Portable Power that some machines may be affected by Aluminum radiators failures as well as water pump failures.

After deep investigation and referring to the engine OEM guidelines of the coolant specification it is very clear that the coolant is playing an important role in keeping the components of the cooling system operational and maximizing the lifetime of the Doosan Generators.

This Service Bulletin outlines the proper application and maintenance of coolant for all Doosan engines, It also updates and simplifies the recommendations and guidelines for the end user.

INSTRUCTION

- 1- **Contact the respective customers in your region and ask them to collect coolant sample from the affected models.**
- 2- **Send the coolant sample for analysis at a trusted local laboratory & get the results.**
- 3- **Compare the results with Doosan recommended coolant mentioned in (Section 1)**
- 4- **Drain the coolant & flush the system if the coolant is not matching with the recommended coolant.**
- 5- **Refill the system with the proper coolant.**
- 6- **Follow the maintenance instructions mentioned in (Section 3).**

SECTION 1: RECOMMENDED COOLANT

Fill the cooling system with premixed fully formulated coolant or with a 50/50 mixture of high-quality water and fully formulated concentrated antifreeze. The fully formulated coolant/antifreeze is ethylene glycol that meets Doosan recommendations.

In the following table you will find the summary of the fully formulated antifreeze coolant recommended by Doosan Portable Power in MEA region.

Doosan Limits for Coolant	
Glycol Concentration	40% - 60%
Water Quality	Distilled or deionized water, or equivalent.
pH	8.5 - 11
Chloride, Fluoride & Bromide	200 ppm
Hardness (Ca and Mg)-max	170 ppm
Sulfate-max	1500 ppm
Buffering Agent (Phosphate & Borate)	200 ppm
Nitrite, Nitrate & Molybdate	400 - 2000 ppm

SECTION 2: STANDARD SERVICE INTERVAL

Coolant replacement limits is 2000 hours or once a year, whichever occurs first.

SECTION 3: COOLANT MAINTENANCE

Coolant testing is required for two reasons:

- To determine the additive concentration and glycol level of the coolant. This will make sure that adequate liner pitting protection and freeze/boiling point protection are achieved.
- To determine if the coolant must be replaced due to contamination.

Test at least twice a year for additive and glycol levels. A Refractometer provides the most accurate freeze protection measurements. Test strips, although less accurate than a refractometer, will also provide an indication of freeze protection and additive levels.

Top up the cooling system as needed using **only** fully formulated antifreeze/coolant.

DON'T top up the coolant using raw water.

Stock maintenance procedure to be followed for standby as well as stock units.

If the coolant does not meet the replacement limits of sulfate, chloride, or pH, it must be drained and replaced with new coolant meeting Doosan Specification. However, if the coolant is contaminated with oil, fuel, grease, solder bloom, silica gel, rust, or scaling, the system must be drained, cleaned, and refilled.

SECTION 4: WARRANTY POLICY

Component failure caused by not performing scheduled maintenance service, such as but not limited to failure to replace filtration elements, not maintaining adequate fluid levels in engine, not keeping the cooling system clean; Failure of components due to the use of fluids that are not compliant with the specifications indicated in the product Operation & Maintenance manual will result to warranty rejection.

Copies of end customer invoices for scheduled maintenance may be required to validate the claim.

Following stock maintenance is mandatory to keep the warranty valid.

Coolant analysis report is a **MUST** while submitting a warranty claim for any part in the cooling system.

Any issues discovered during inspection of engine coolant must be reported immediately to your Regional Service manager for further support.

To be submitted in the form of a T.I.R (Technical Incident Report)

- Include picture of Doosan Portable Power data plate
- detailed picture showing damage or issue
- brief description of findings.

Regional Service Manager - Territorial Responsibility

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